

Attached hereto is a marked-up version of the changes made to the specification and claims by the current amendment. The attached page is captioned **"Version with markings to show changes made."**

I. REJECTIONS UNDER 35 U.S.C. §102(e):

The Office Action has rejected claims 1-2, 12-13 and 23-24 under 35 U.S.C. §102(e) as being anticipated by Waldron, III et al. (U.S. Patent No. 6,021,425) (hereinafter "Waldron"). Applicants respectfully traverse the rejections for at least the reasons below and respectfully request that the Examiner reconsider and withdraw these rejections.

For a claim to be anticipated under 35 U.S.C. §102, each and every claim limitation must be found within the cited prior art reference and arranged as required by the claim. M.P.E.P. §2131.

Waldron does not disclose "determining if a *job* is available for scheduling" as recited in claim 1 and similarly in claims 12 and 23. Instead, Waldron discloses that "scheduling is based upon a number of factors, including priority category, priority level within a category, and when indication of readiness to run was first noted by the scheduler. When a process becomes ready to run a process control block which represents the process in the operating system is updated to indicate a change in status." Column 5, Lines 2-8. Thus, Waldron discloses that a process or thread may be determined to be scheduled to the processor based in part if the thread is ready to run. Determining if a thread is ready to run is not determining if a job is available to be scheduled. A job does not refer to a thread but instead may refer to distributions targeted for ultimate delivery to an endpoint and results information for a report-to system. Therefore, Waldron does not disclose determining if a *job* is available for scheduling.

Waldron does not disclose "determining, in response to said step of determining if said job is available, if a *session* is available, wherein said *session* is included in a *pool of sessions*, said *pool of sessions* having a *preselected one of a set of priority levels corresponding to a priority level of said job* and wherein said *session effects an execution of said job*" as recited in claim 1 and similarly in claims 12 and 23. Instead, Waldron discloses that "round-robin scheduling is specifically designed for time sharing systems. Processor time and other resource allocations are sequentially dedicated to each task admitted to a ready to run queue 109. Each task at a given priority level initially has equal claim to processor time. Within the IBM OS/2 disk operating system, processes are not per se executed, rather processes include one or more threads, which are the schedulable unit. In an algorithm suitable for use with the present invention, 128 priority levels are defined, 32 of which (ranked from the lowest priority "0" to highest priority "31") are associated with four priority classes 100, 102, 104 and 106. The priority classes are from highest to lowest, time-critical, server, regular and idle-time. In a typical personal computer system utilizing a graphic user interface (e.g. Windows), the highest priority level 100 includes threads relating to control of the video output interface to a user, i.e. control of image displayed on a monitor, and threads relating to communications with other computers. The next highest priority level 102 may include threads relating to the application programs currently utilized by the user if boosted. The lowest priority category 106 may include threads relating to housekeeping on the computer." Column 5, Lines 9-30. Thus, Waldron discloses a queue referred to as a "ready to run queue" divided into four priority classes where each priority classes has thirty-two (32) priority levels. Processes or threads may be stored in a particular class and priority level of the ready to run queue. A scheduler may then dispatch the appropriate thread to the processor to be executed based in part on the priority scheme described above. As stated above, Waldron does not disclose the concept of a job. Waldron simply discloses threads being assigned a priority level and class where that priority level and class does not correspond to a priority level of a job. Waldron uses the term "thread" as defined by OS/2. A thread according to OS/2 is a part of a task

that uses a minimum CPU allocation. See OS/2 Warp (PowerPC Edition) A First Look, December 1995. Hence, it does not make sense to identify threads as defined in Waldron with the concept of a session. Therefore, Waldron does not disclose determining, in response to the step of determining if the job is available, if a *session* is available, where the *session* is included in a *pool of sessions*, the *pool of sessions* having a *preselected one of a set of priority levels corresponding to a priority level of the job* and where the *session effects an execution of the job*.

Waldron does not disclose "*launching said session to effect said execution of said job, if said session is available*" as recited in claim 1 and similarly in claims 12 and 23. The Examiner has directed Applicants' attention to Column 2, Lines 53-63 of Waldron as disclosing the above claim limitation. Paper No. 3, Page 6. Waldron discloses that "a normal and an expedited scheduling path are provided for scheduling jobs on the processor. The jobs are each assigned a priority for execution on the processor. A queue is provided for the placement of jobs ready for execution. Periodically, a job holding a highest execution priority from among jobs in the queue is selected. If a process is executing on the processor, the execution priority of the selected job is compared to the execution priority of the executing job. Responsive to the selected job holding a higher execution priority or to absence of an executing job, the expedited scheduling path is invoked. Otherwise the normal scheduling path is invoked." Column 2, Lines 52-64. Thus, Waldron discloses a normal and an expedited scheduling path of threads (referred to as "jobs" in the above-cited passage but is not to be confused with "jobs" as used by Applicants). The threads are assigned a priority, e.g., a particular priority class and priority level, for execution on the processor. Periodically, a thread with the highest priority in the queue referred to as the ready to run queue is selected. If a process which may include one or more threads is executing on the processor, the execution priority of the selected thread is compared to the execution priority of the executing process. If the selected thread has a higher priority than the process being executed, then the expedited scheduling path is invoked. Otherwise, the normal scheduling path is invoked. While Waldron

discloses invoking a particular scheduling path to dispatch a thread to the processor to be executed, Waldron does not disclose launching the session to effect the execution of the *job*.

For at least the above reasons, claims 1, 12 and 23 are not anticipated by Waldron. Claims 2, 13 and 24 each recite combinations of features including the above combinations, and thus are not anticipated for at least the above reasons as well. Claims 2, 13 and 24 recite additional features which, in combination with the features of the claims upon which they depend, are not anticipated by Waldron.

As a result of the foregoing, Applicants respectfully assert that not each and every claim limitation was found within the cited prior art reference and thus claims 1-2, 12-13 and 23-24 are not anticipated by Waldron.

It is noted that words are italicized only for emphasis. Words that are italicized are not meant to imply that only those words are not disclosed in the cited prior art.

## II. REJECTIONS UNDER 35 U.S.C. §103(a):

The Office Action has rejected claims 3-11, 14-22 and 25-33 under 35 U.S.C. §103(a) as being unpatentable over Waldron in view of Barroux (U.S. Patent No. 6,182,110) (hereinafter "Barroux"). Applicants respectfully traverse the rejections for at least the reasons below and respectfully request that the Examiner reconsider and withdraw these rejections.

### A. **No Suggestion or Motivation to Combine Waldron with Barroux**

A *prima facie* showing of obviousness requires the Examiner to establish, *inter alia*, that the prior art references teach or suggest, either alone or in combination, all of the limitations of the claimed invention, and the Examiner must provide a motivation or suggestion to combine or modify the prior art reference to make the claimed inventions. M.P.E.P. §2142. The motivation or suggestion to

combine references must come from one of three possible sources: the nature of the problem to be solved, the teaching of the prior art and the knowledge of persons of ordinary skill in the art. *In re Rouffet*, 47 U.S.P.Q.2d. 1453,1458 (Fed. Cir. 1998). The showings must be clear and particular. *In re Lee*, 277 F.3d 1338, 1343, 61 U.S.P.Q.2d 1430, 1433-34 (Fed. Cir. 2002); *In re Kotzab*, 217 F.3d 1365, 1370, 55 U.S.P.Q.2d 1313, 1317 (Fed. Cir. 2000); *In re Dembiczak*, 50 U.S.P.Q.2d. 1614, 1617 (Fed. Cir. 1999). Broad conclusory statements regarding the teaching of multiple references, standing alone, are not evidence. *Id.*

In order to reject under 35 U.S.C. §103, therefore, the Examiner must provide a proper motivation for combining or modifying the references. *In re Rouffet*, 47 U.S.P.Q.2d. 1453, 1457-1458 (Fed. Cir. 1998); M.P.E.P. §2142. The Examiner's motivation for modifying Waldron with Barroux is to "*enhance the expendability and compatibility of Waldron's system since it would allow for a thread of instructions and tasks to be operated and performed onto another endpoint or system and allow for one system to control a large dynamic group of systems.*" Paper No. 3, Page 7. Another motivation presented by the Examiner is to "*allow existing connections and newly found and created connections to receive the thread to be operated and performed on the remote system.*" Paper No. 3, Page 8. Another motivation presented by the Examiner is to "*avoid processes being performed incompletely without any sort of notification, and instead allow the thread to be processed again to be correctly finished and complete, thereby ensuring the operation the thread is to perform, to indeed conclude.*" Paper No. 3, Page 8. Another motivation presented by the Examiner is to "*allow the thread to be processed again to be correctly finished and complete and that a particular error be returned so that the problem can be resolved according to the particular condition.*" Paper No. 3, Page 9. Another motivation presented by the Examiner is to "*avoid processes being performed incompletely without any sort of notification that there is no way of the task completing in the first place and that the change of it completing is not possible.*" Paper No. 13, Page 9. Another motivation presented by the Examiner is to "*allow*

*schedules that could not complete for some reason or schedules that need to be done on a recurring basis to be repeated."* Paper No. 13, Pages 10 and 12. Another motivation presented by the Examiner is to *"allow schedules that could not complete for some reason or schedules that need to be done on a recurring basis to be repeated on a specific recurring basis such as every day of the week."* Paper No. 13, Pages 10 and 12-13. Another motivation presented by the Examiner is to *"allow schedules that could not finish at one point in time to be performed at a later time and registering this with the system so as the same schedule can launch the tasks again."* Paper No. 13, Pages 11 and 13. Another motivation presented by the Examiner is to *"allow schedules that could not finish at one point in time to be performed at a later time and registering this with the system so as the same schedule can launch the tasks again, and thus be automatically initiated by the target system when the target system is capable."* Paper No. 13, Pages 11-12.

There is no motivation to combine Waldron with Barroux as there is no suggestion or motivation in either Waldron or Barroux or in their combination or in the knowledge of those ordinary skilled in the art to combine the teaching of a *assigning processes a priority level and class which is used to determine when the processes are scheduled* as taught in Waldron with the teaching of *selecting times at which a task is to be performed or exclusion times when a task is not to be performed at the node level* as taught in Barroux.

Waldron teaches that "round-robin scheduling is specifically designed for time sharing systems. Processor time and other resource allocations are sequentially dedicated to each task admitted to a ready to run queue 109. Each task at a given priority level initially has equal claim to processor time. Within the IBM OS/2 disk operating system, processes are not per se executed, rather processes include one or more threads, which are the schedulable unit. In an algorithm suitable for use with the present invention, 128 priority levels are defined, 32 of which (ranked from the lowest priority "0" to highest priority "31") are associated with four priority classes

100, 102, 104 and 106. The priority classes are from highest to lowest, time-critical, server, regular and idle-time. In a typical personal computer system utilizing a graphic user interface (e.g. Windows), the highest priority level 100 includes threads relating to control of the video output interface to a user, i.e. control of image displayed on a monitor, and threads relating to communications with other computers. The next highest priority level 102 may include threads relating to the application programs currently utilized by the user if boosted. The lowest priority category 106 may include threads relating to housekeeping on the computer." Column 5, Lines 9-30. Thus, Waldron teaches a queue referred to as a "ready to run queue" divided into four priority classes where each priority classes has thirty-two (32) priority levels. Processes or threads may be stored in a particular class and priority level of the ready to run queue. A scheduler may then dispatch the appropriate thread to the processor to be executed based in part on the priority scheme described above.

Barroux teaches a "method and apparatus for efficiently scheduling tasks on a network. A user may schedule node-specific tasks across the network without specifying particular times for each node. One application of the present invention is scheduling of survey tasks across the network. A user may select times at which a task is to be performed or exclusion times when a task is not to be performed at the node level, subnet level, or level of the whole network." Abstract. Hence, Barroux teaches selecting times at which a task is to be performed or exclusion times when a task is not to be performed.

The Examiner has not shown why Waldron should be modified with Barroux to *enhance the expendability and compatibility of Waldron's system since it would allow for a thread of instructions and tasks to be operated and performed onto another endpoint or system and allow for one system to control a large dynamic group of systems* from either the nature of the problem to be solved, the teachings of the prior art or in the knowledge of persons of ordinary skill in the art. *In re Rouffet*, 47 U.S.P.Q.2d. 1453,1458 (Fed. Cir. 1998). Neither has the Examiner shown why

Waldron should be modified with Barroux to *allow existing connections and newly found and created connections to receive the thread to be operated and performed on the remote system*. Neither has the Examiner shown why Waldron should be modified with Barroux to *avoid processes being performed incompletely without any sort of notification*. Neither has the Examiner shown why Waldron should be modified with Barroux to *allow the thread to be processed again to be correctly finished and complete and that a particular error be returned so that the problem can be resolved according to the particular condition*. Neither has the Examiner shown why Waldron should be modified with Barroux to *allow schedules that could not complete for some reason or schedules that need to be done on a recurring basis to be repeated*. Neither has the Examiner shown why Waldron should be modified with Barroux to *allow schedules that could not finish at one point in time to be performed at a later time and registering this with the system so as the same schedule can launch the tasks again*.

The Examiner must submit **objective evidence** and not rely on his own subjective opinion in support of modifying Waldron with Barroux to *enhance the expendability and compatibility of Waldron's system*. *In re Lee*, 61 U.S.P.Q.2d 1430, 1434 (Fed. Cir. 2002). Further, the Examiner has not shown why a reference that teaches *assigning processes a priority level and class which is used to determine when the processes are scheduled* should be combined with a reference that teaches *selecting times at which a task is to be performed or exclusion times when a task is not to be performed* from either the nature of the problem to be solved, the teachings of the prior art or in the knowledge of persons of ordinary skill in the art. *In re Rouffet*, 47 U.S.P.Q.2d. 1453,1458 (Fed. Cir. 1998). Therefore, there is no motivation to combine Waldron with Barroux as there is no suggestion or motivation in either Waldron or Barroux or in their combination or in the knowledge of those ordinary skilled in the art to combine the teaching of *assigning processes a priority level and class which is used to determine when the processes are scheduled* as taught in Waldron with the teaching of *selecting times at which a task is to be performed or*



*exclusion times when a task is not to be performed* as taught in Barroux. Therefore, the Examiner has not presented a *prima facie* case of obviousness for rejecting claims 3-11, 14-22 and 25-33.

Further, there is no motivation to modify Waldron with Barroux as the *proposed modification would render the invention in Waldron unsatisfactory for its intended purpose and therefore there is no suggestion or motivation to make the proposed modification. In re Gordon*, 733 F.2d 900, 221 U.S.P.Q. 1125 (Fed. Cir. 1984); M.P.E.P. §2143.01. Furthermore, the *proposed modification would change the principle of operation of Waldron* and therefore the teachings of Waldron are not sufficient to render the claims *prima facie* obvious. *In re Ratti*, 270 F.2d 810, 123 U.S.P.Q. 349 (C.C.P.A. 1959); M.P.E.P. §2143.01. As stated above, Waldron teaches assigning processes a priority level and class which is used to determine when the processes are scheduled. Barroux teaches selecting times at which a task is to be performed or exclusion times when a task is not to be performed. By selecting times at which a process is to be performed or not performed, the priority scheme in Waldron would be rendered useless. In other words, the threads in Waldron could no longer be assigned a priority level and class with which to determine when the processes are scheduled because those processes are scheduled based on selecting times. Hence, the *proposed modification would render the invention in Waldron unsatisfactory for its intended purpose* and therefore there is no suggestion or motivation to make the proposed modification. *In re Gordon*, 733 F.2d 900, 221 U.S.P.Q. 1125 (Fed. Cir. 1984); M.P.E.P. §2143.01. Furthermore, the *proposed modification would change the principle of operation of Waldron* and therefore the teachings of Waldron are not sufficient to render the claims *prima facie* obvious as a matter of law. *In re Ratti*, 270 F.2d 810, 123 U.S.P.Q. 349 (C.C.P.A. 1959); M.P.E.P. §2143.01. Therefore, the Examiner has not presented a *prima facie* case of obviousness for rejecting claims 3-11, 14-22 and 25-33.

**B. Waldron and Barroux, Taken Singly or in Combination, do not Teach or Suggest the Following Claim Limitations**

Waldron and Barroux, taken singly or in combination, do not teach or suggest *"creating a connection to a target system for said execution of said job"* as recited in claim 3 and similarly in claims 14 and 25. Instead, Barroux teaches that "at step 402, task scheduler 302 determines by reference to administrative database 230 whether a repetition period has been specified for a given node. If a repetition period has been specified for the target node, task scheduler 302 *schedules the selected task for the target node* at step 404 with the specified repetition period. If no repetition period has been specified, then task scheduler 302 proceeds to step 406 where it checks if a repetition period has been specified for the subnet to which the target node belongs. If this subnet repetition period has been specified, then task *scheduler 302 schedules the selected task for the target node at step 404 in accordance with the subnet repetition period*. If this subnet repetition period has also been left unspecified, then task scheduler 302 proceeds to step 408 where it checks if a repetition period for the whole network has been specified. If only this network repetition period has been specified, then *task scheduler 302 schedules the selected task for the target node at step 404.*" Column 6, Lines 8-26. Thus, Barroux simply teaches scheduling a selected task for a target node but does not teach *creating a connection to a target system for execution of the job*. Scheduling a task simply refers to determining which task is to be dispatched to the target node. This does not include *creating a connection to a target system*. Neither does this include creating a connection to a target system *for execution of the job*. Accordingly, one skilled in the art would not be able to recreate claims 3, 14 and 25 in view of the cited prior art.

Waldron and Barroux, taken singly or in combination, do not teach or suggest *"determining if said connection is an existing connection, and wherein said step of creating said connection is performed if said connection is not an existing connection"* as recited in claim 4 and similarly in claims 15 and 26. The Examiner states that "the use and advantages for identifying nodes is well known to one skilled in the art at time the invention was made." Paper No. 3, Page 8. Applicants respectfully contest the implied assertion that *determining if the connection is an*

*existing connection*, and where the step of creating the connection is *performed if the connection is not an existing connection* is well known to one skilled in the art at time the invention was made. The Examiner has directed Applicants' attention to Column 9, Lines 27-34 and Column 11, Lines 30-38 of Barroux as teaching the above cited claim limitation. Paper No. 3, Page 8. Instead, Barroux teaches that "once survey tasks have been completed, they return their results to asset database 232. Asset database 232 incorporates a special database structure to facilitate management information about network 202. In particular, asset database 232 facilitates easy tracking of node configuration over time." Column 9, Lines 5-9. Further, Barroux teaches that "version field 706 includes a version number to distinguish multiple records referring to the same system where each record indicates configuration over a different time period. Configuration field 708 includes configuration information for the identified system." Column 9, Lines 27-31. Further, Barroux teaches "by examining a series of records for a particular node within system table 700, one can track the system configuration history for each node. For each configuration state, one can identify the time that the configuration was first observed by reference to FUD field 710 and the last time the configuration was observed by reference to LUD 712. Similarly one can identify the first reporting and last reporting network survey systems by reference to FUN field 714 and LUN field 716." Column 11, Lines 30-38. Hence, Barroux teaches an asset database that facilitates tracking of node configuration over time. The asset database may include a version field identifying a version number of a particular record as well as a configuration field to store configuration information. The asset database may further include information as to the first and last time the configuration state was observed and information that identifies the first and last reporting network survey system. Applicants cannot identify any language in the cited passages that teaches determining if the connection is an existing connection. Further, Applicants cannot identify any language in the cited passages that teaches that the step of creating the connection is performed if the connection is not an existing connection. Applicants respectfully request the Examiner to particularly point out in either Waldron or Barroux or in their

combination or in the knowledge of those skilled in the art where it is taught or suggested *determining if the connection is an existing connection*, and where the step of creating the connection is *performed if the connection is not an existing connection*. Accordingly, one skilled in the art would not be able to recreate claims 4, 15 and 26 in view of the cited prior art.

Waldron and Barroux, taken singly or in combination, do not teach or suggest "step of *launching an error handling thread in response to an error condition*, said *error handling thread releasing said session*" as recited in claim 5 and similarly in claims 16 and 27. The Examiner states that "error handling procedure is well known to one skilled in the art at time the invention was made." Paper No. 3, Page 8. Applicants respectfully contest the implied assertion that *launching an error handling thread in response to an error condition*, said *error handling thread releasing said session* is well known to one skilled in the art at time the invention was made. The Examiner has directed Applicants' attention to Figure 12, references 1210-1285 of Barroux as teaching the above cited claim limitation. Paper No. 3, Page 8. Instead, Barroux teaches that "the process of selecting a software package (shown as step 1010 in FIG. 10) can be further divided as shown in FIG. 12." Column 13, Lines 25-27. Thus, Barroux simply teaches the process of selecting a software package. Applicants cannot identify any language in the cited passages that teaches *launching an error handling thread in response to an error condition*, *the error handling thread releasing the session*. Applicants respectfully request the Examiner to particularly point out in either Waldron or Barroux or in their combination or in the knowledge of those skilled in the art where it is taught or suggested *launching an error handling thread in response to an error condition*, *the error handling thread releasing the session*. Accordingly, one skilled in the art would not be able to recreate claims 5, 16 and 27 in view of the cited prior art.

Waldron and Barroux, taken singly or in combination, do not teach or suggest "step of *changing value of a job state from a first value to a second value in response*

*to said launching of said error handling thread"* as recited in claim 6 and similarly in claims 17 and 28. The Examiner states that "error handling procedure is well known to one skilled in the art at time the invention was made." Paper No. 3, Pages 8-9. Applicants respectfully contest the implied assertion that *changing value of a job state from a first value to a second value in response to the launching of the error handling thread* is well known to one skilled in the art at time the invention was made. The Examiner has directed Applicants' attention to Figure 12, references 1210-1285 of Barroux as teaching the above cited claim limitation. Paper No. 3, Page 9. Instead, Barroux teaches that "the process of selecting a software package (shown as step 1010 in FIG. 10) can be further divided as shown in FIG. 12." Column 13, Lines 25-27. Thus, Barroux simply teaches the process of selecting a software package. Applicants cannot identify any language in the cited passages that teaches *changing value of a job state from a first value to a second value in response to the launching of the error handling thread*. Applicants respectfully request the Examiner to particularly point out in either Waldron or Barroux or in their combination or in the knowledge of those skilled in the art where it is taught or suggested *changing value of a job state from a first value to a second value in response to the launching of the error handling thread*. Accordingly, one skilled in the art would not be able to recreate claims 6, 17 and 28 in view of the cited prior art.

Waldron and Barroux, taken singly or in combination, do not teach or suggest "wherein said *first value signals that said job is available for scheduling*" as recited in claim 7 and similarly in claims 18 and 29. The Examiner states that "the first value denoting schedule availability is well known to one skilled in the art at the time the invention was made." Paper No. 3, Page 9. Applicants respectfully contest the implied assertion that *the first value signals that the job is available for scheduling* is well known to one skilled in the art at time the invention was made. The Examiner has directed Applicants' attention to Figure 12, references 1210, 1230, 1250 and 1270 of Barroux as teaching the above cited claim limitation. Paper No. 3, Page 9. Instead, Barroux teaches that "the process of selecting a software package (shown as

step 1010 in FIG. 10) can be further divided as shown in FIG. 12." Column 13, Lines 25-27. Thus, Barroux simply teaches the process of selecting a software package. Applicants cannot identify any language in the cited passages that teaches that *the first value signals that the job is available for scheduling*. Applicants respectfully request the Examiner to particularly point out in either Waldron or Barroux or in their combination or in the knowledge of those skilled in the art where it is taught or suggested *the first value signals that the job is available for scheduling*. Accordingly, one skilled in the art would not be able to recreate claims 7, 18 and 29 in view of the cited prior art.

Waldron and Barroux, taken singly or in combination, do not teach or suggest *"step of retrying said steps of determining if a job is available for scheduling, determining if a schedule is available, and launching said session in response to an error condition"* as recited in claim 8 and similarly in claims 19 and 30. The Examiner states that the "use and advantages for retrying tasks is well known to one skilled in the art at the time the invention was made." Paper No. 3, Pages 10 and 12. Applicants respectfully contest the implied assertion that the *step of retrying the steps of determining if a job is available for scheduling, determining if a schedule is available, and launching the session in response to an error condition* is well known to one skilled in the art at time the invention was made. The Examiner has directed Applicants' attention to Column 4, Lines 15-27 of Barroux as teaching the above cited claim limitation. Paper No. 3, Pages 10 and 12. Instead, Barroux teaches that "FIG. 2 depicts an integrated resource 200 for collecting and managing survey information about a network 202 in accordance with one embodiment of the present invention...Integrated resource includes an Embedded Database System (EDS)." Column 3, Lines 43-51. Further, Barroux teaches that "EDS 206 includes an administrative database 230 and an asset database 232. Administrative database 230 stores data that defines discovery tasks performed by integrated resource 200 on network 202. Each task identifies a probe mechanism, an IP address (for IP networks), and a time to execute the task...Upon initialization, integrated resource 200

queries this database and computes a schedule of tasks to be executed." Column 4, Lines 15-22. Thus, Barroux simply teaches a resource for collecting and managing survey information about a network that includes an administrative database that stores data defining tasks performed by the resource. The administrative database may be queried to compute a schedule of tasks to be executed. Applicants are confused as to the relevance of the cited passage with respect to the above-stated claim limitation. Applicants respectfully request the Examiner to particularly point out the relevance of the cited passage with respect to the above-stated claim limitation pursuant to 37 C.F.R. §1.104(c)(2). Accordingly, one skilled in the art would not be able to recreate claims 8, 19 and 30 in view of the cited prior art.

Waldron and Barroux, taken singly or in combination, do not teach or suggest "*said step of retrying is repeated until a predetermined time interval has elapsed*" as recited in claim 9 and similarly in claims 20 and 31. The Examiner states that the "use and advantages for retrying tasks based on elapsed time is well known to one skilled in the art at the time the invention was made." Paper No. 3, Pages 10 and 12. Applicants respectfully contest the assertion that retrying tasks based on elapsed time is well known to one skilled in the art at the time the invention was made. Further, Applicants respectfully contest the implied assertion that *step of retrying is repeated until a predetermined time interval has elapsed* is well known to one skilled in the art at time the invention was made. The Examiner has directed Applicants' attention to Column 4, Lines 15-27 and 37-55 of Barroux as teaching the above cited claim limitation. Paper No. 3, Pages 10 and 12. Instead, Barroux teaches that "FIG 2 depicts an integrated resource 200 for collecting and managing survey information about a network 202 in accordance with one embodiment of the present invention...Integrated resource includes an Embedded Database System (EDS)." Column 3, Lines 43-51. Further, Barroux teaches that "EDS 206 includes an administrative database 230 and an asset database 232. Administrative database 230 stores data that defines discovery tasks performed by integrated resource 200 on network 202. Each task identifies a probe mechanism, an IP address (for IP

networks), and a time to execute the task...Upon initialization, integrated resource 200 queries this database and computes a schedule of tasks to be executed." Column 4, Lines 15-22. Further, Barroux teaches that "clock process 310 maintains a list of tasks to be performed by integrated resource 200. It places these tasks into a linked list, sorted by time. It tracks elapsed time provided from event handler 312 and dispatches tasks to task scheduler 302 according to elapsed time." Column 5, Lines 43-47. Thus, Barroux simply teaches a resource for collecting and managing survey information about a network that includes an administrative database that stores data defining tasks performed by the resource. The administrative database may be queried to compute a schedule of tasks to be executed. The resource may further include a resource engine that includes a task scheduler and a clock process. The clock process may be configured to maintain a list of tasks that are dispatched to the task scheduler based on elapsed time provided from the event handler. Hence, the tasks are dispatched to the task scheduler based on timing. Dispatching tasks to the task scheduler is not relevant to the step of retrying being repeating until a predetermined time interval has elapsed. Accordingly, one skilled in the art would not be able to recreate claims 9, 20 and 31 in view of the cited prior art.

Waldron and Barroux, taken singly or in combination, do not teach or suggest "*registering a callback method in response to an expiry of said predetermined time interval*" as recited in claim 10 and similarly in claims 21 and 32. The Examiner states that the "use and advantages for responding to an elapsed time expiration is well known to one skilled in the art at the time the invention was made." Paper No. 3, Pages 11 and 32. Applicants respectfully contest the implied assertion *registering a callback method in response to an expiry of said predetermined time interval* is well known to one skilled in the art at time the invention was made. The Examiner has directed Applicants' attention to Column 4, Lines 15-27 and 37-64 of Barroux as teaching the above cited claim limitation. Paper No. 3, Pages 10 and 13. Instead, Barroux teaches that "FIG. 2 depicts an integrated resource 200 for collecting and managing survey information about a network 202 in accordance with one



embodiment of the present invention...Integrated resource includes an Embedded Database System (EDS)." Column 3, Lines 43-51. Further, Barroux teaches that "EDS 206 includes an administrative database 230 and an asset database 232. Administrative database 230 stores data that defines discovery tasks performed by integrated resource 200 on network 202. Each task identifies a probe mechanism, an IP address (for IP networks), and a time to execute the task...Upon initialization, integrated resource 200 queries this database and computes a schedule of tasks to be executed." Column 4, Lines 15-22. Further, Barroux teaches that "clock process 310 maintains a list of tasks to be performed by integrated resource 200. It places these tasks into a linked list, sorted by time. It tracks elapsed time provided from event handler 312 and dispatches tasks to task scheduler 302 according to elapsed time." Column 5, Lines 43-47. Thus, Barroux simply teaches a resource for collecting and managing survey information about a network that includes an administrative database that stores data defining tasks performed by the resource. The administrative database may be queried to compute a schedule of tasks to be executed. The resource may further include a resource engine that includes a task scheduler and a clock process. The clock process may be configured to maintain a list of tasks that are dispatched to the task scheduler based on elapsed time provided from the event handler. Hence, the tasks are dispatched to the task scheduler based on timing. Dispatching tasks to the task scheduler is not relevant to the step of registering a callback method in response to an expiry of said predetermined time interval. Accordingly, one skilled in the art would not be able to recreate claims 10, 21 and 32 in view of the cited prior art.

Waldron and Barroux, taken singly or in combination, do not teach or suggest *"said steps of determining if a job is available for scheduling, determining if a session is available, and launching said session are performed in response to an invoking of said callback method by a target system, said target system for execution of said job"* as recited in claim 11 and similarly in claims 22 and 33. The Examiner states that the "use and advantages for a target system responding to an elapsed time expiration is

well known to one skilled in the art at the time the invention was made." Paper No. 3, Page 11. Applicants respectfully contest the implied assertion *the steps of determining if a job is available for scheduling, determining if a session is available, and launching the session are performed in response to an invoking of said callback method by a target system, the target system for execution of the job* is well known to one skilled in the art at time the invention was made. The Examiner has directed Applicants' attention to Column 4, Lines 15-27 and 37-64 of Barroux as teaching the above cited claim limitation. Paper No. 3, Page 11. Instead, Barroux teaches that "FIG. 2 depicts an integrated resource 200 for collecting and managing survey information about a network 202 in accordance with one embodiment of the present invention...Integrated resource includes an Embedded Database System (EDS)." Column 3, Lines 43-51. Further, Barroux teaches that "EDS 206 includes an administrative database 230 and an asset database 232. Administrative database 230 stores data that defines discovery tasks performed by integrated resource 200 on network 202. Each task identifies a probe mechanism, an IP address (for IP networks), and a time to execute the task...Upon initialization, integrated resource 200 queries this database and computes a schedule of tasks to be executed." Column 4, Lines 15-22. Further, Barroux teaches that "clock process 310 maintains a list of tasks to be performed by integrated resource 200. It places these tasks into a linked list, sorted by time. It tracks elapsed time provided from event handler 312 and dispatches tasks to task scheduler 302 according to elapsed time." Column 5, Lines 43-47. Thus, Barroux simply teaches a resource for collecting and managing survey information about a network that includes an administrative database that stores data defining tasks performed by the resource. The administrative database may be queried to compute a schedule of tasks to be executed. The resource may further include a resource engine that includes a task scheduler and a clock process. The clock process may be configured to maintain a list of tasks that are dispatched to the task scheduler based on elapsed time provided from the event handler. Hence, the tasks are dispatched to the task scheduler based on timing. Dispatching tasks to the task scheduler is not relevant to the above cited claim limitations. Accordingly, one

skilled in the art would not be able to recreate claims 11, 22 and 33 in view of the cited prior art.

### C. Conclusion

As a result of the foregoing, Applicants respectfully assert that the Examiner's *prima facie* case of obviousness is not taught or suggested by the cited prior art since there are numerous claim limitations not taught or suggested in the cited prior art, and thus one skilled in the art would not have been able to recreate the claimed invention in view of the cited prior art.

It is noted that words are italicized only for emphasis. Words that are italicized are not meant to imply that only those words are not taught or suggested in the cited prior art.

### III. DRAWINGS OBJECTIONS:

The Office Action has objected to the drawings under 37 C.F.R. §1.84(p)(5) because they do not include the reference sign 100 in the drawing. Paper No. 3, Page 2. Applicants have amended Figure 1 to include element number 100 and therefore believes the amendment addresses the objection.

The Office Action has further objected to the drawings under 37 C.F.R. §1.84(p)(4) because reference characters "300", "308" and "350" have been used to designate more than one object. Paper No. 3, Page 2. Upon review of the drawings, Applicants believe that element number 300 designates only one object. Applicants respectfully request the Examiner to particularly point out in the drawings where element number 300 designates more than one object. Applicants have amended Figure 3A to replace one of the elements designated as "308" to be "301." Further, Applicants have amended Figure 3D by replacing the element designated as "350" as "340." Applicants believe these amendments address the above-identified objections.

The Office Action has objected to the drawings under 37 C.F.R. §1.84(p)(4) because reference character "306" has been used to designate multiple references in Figures 3A and 4. Paper No. 3, Page 2. Applicants respectfully contests the assertion that element number 306 designates multiple references. Instead, Figure 4 illustrates performing step 310 in Figure 3A which includes steps following step 306 in Figure 3A.

The Office Action has objected to the drawings under 37 C.F.R. 1.84(p)(5) because the reference character "378" was not mentioned in the drawings. Paper No. 3, Page 3. Applicants have amended Figure 3C to replace one of the elements designated as "378" to be "379." Applicants believe this amendment addresses the above-identified objection.

The Office Action has objected to Figure 5 because "Output obs" is informal. Paper No. 3, Page 3. Applicants have amended Figure 5 to replace the wording

"Output obs" with the wording "Jobs." Applicants believe this amendment addresses the above-identified objection.

IV. ABSTRACT OBJECTIONS:

The Office Action has objected to the abstract because it exceeds the limit of 150 words. Paper No. 3, Page 3. Applicants have amended the abstract to limit its length to be 150 words or less and believes this amendment addresses the objection.

V. SPECIFICATION OBJECTIONS:

The Office Action has objected to the specification for failing to include a respective serial and/or patent number associated with related and co-pending applications. Paper No. 3, Page 4. Applicants have amended the specification to include serial numbers associated with the related and co-pending applications and therefore believes the amendments address the objections.

The Office Action has objected to the specification for failing to include a brief description of the drawings. Paper No. 3, Page 5. Applicants kindly direct the Examiner's attention to page 7 of the specification as disclosing a brief description of the drawings.

VI. CLAIM OBJECTIONS:

The Office Action has objected to the claims 2, 13 and 24 because of the phrase "an thread" being improper. Paper No. 3, Page 4. Applicants have amended the phrase "an thread" to be "a thread" in claims 2, 13 and 24 and believes the amendment addresses the objection.

**VII. REJECTIONS UNDER 35 U.S.C. §112:**

The Office Action has rejected claim 23 under 35 U.S.C. §112, second paragraph, for insufficient antecedent basis. Paper No. 3, Page 4. Applicants have amended claim 23 by deleting the phrase "said" in front of the phrase "instructions for determining."

Further, the Office Action has rejected claim 30 under 35 U.S.C. §112, second paragraph, for the phrase "error condition" on line 3 in claim 30 being confused with the error condition in claim 27. Applicants have amended claim 30 by deleting the dependency from claim 29 to be from claim 23.

Further, claims 8, 19 and 30 are rejected under 35 U.S.C. §112, second paragraph, for reciting the limitation "said session in response to an error condition" with insufficient antecedent basis. Paper No. 3, Page 5. Applicants respectfully direct the Examiner's attention to the limitation "determining if a session is available" stated above the limitation "said session in response to an error condition" in claims 8, 19 and 30 thereby providing antecedent basis for the limitation "said session in response to an error condition."

Further, the Office Action has rejected claims 10, 21 and 32 under 35 U.S.C. §112, second paragraph, for failing to particularly point out and distinctly claim the subject matter which applicants regard as the invention. Paper No. 3, Page 5. The Examiner states that "registering a callback method is not described in the disclosure to understand how the callback method is to be performed in relation to the expired time interval." Paper No. 3, Page 5. Applicants respectfully direct the Examiner's attention to page 21 of the Specification as providing support for registering a callback method. Further, Applicants respectfully traverse the rejection under 35 U.S.C. §112, as a person of ordinary skill in the art would know whether they infringe claims 10, 21 and 32. That is, Applicants respectfully assert that a person of ordinary skill in the art would understand the limitations conveyed in the claims 10, 21 and 32. A claim is not indefinite simply because it is hard to understand nor is the purpose of

the claim to explain the technology or how it works. *See S3 Inc. v. nVIDIA Corp.*, 59 U.S.P.Q.2d 1745, 1748 (Fed. Cir. 2001). The purpose is to state the legal boundaries of the patent grant. *See Id.*

Accordingly, Applicants submit that claims 8, 10, 19, 21, 23, 30 and 32 are not indefinite and therefore are allowable.

VIII. INTERVIEW SUMMARY:

Applicants appreciate the Examiner for discussing the office action and in particular claim 1 with Applicants on December 19, 2002.

IX. CONCLUSION

As a result of the foregoing, Applicants respectfully assert that the application is in condition for allowance and respectfully request an early allowance of claims 1-33.

Applicants respectfully request that the Examiner call Applicants' attorney at the below listed number if the Examiner believes that such a discussion would be helpful in resolving any remaining problems.

Respectfully submitted,

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**VERSION WITH MARKINGS TO SHOW CHANGES MADE****In the Abstract:**

The Abstract beginning at line 4 of page 33 has been amended as follows:

An apparatus and method for scheduling data distributions to or results information from, or collectively, "jobs" to a plurality of data processing systems via a network. A connection to a target system is created. For each distribution, a session, which is an independent thread, is allocated from one of a plurality of pool of sessions and launched to effect execution of the job. Each pool corresponds to a predetermined priority level, and the session is allocated from the pool having the same priority level as the priority level of the job being scheduled. A connection supports a multiplicity of independent threads. In the event of an error, the session is released, and the scheduling of the aborted job is retried after a predetermined retry interval expires. After expiry of the retry interval, a callback method is invoked when the target system on which the scheduled job is executed becomes accessible. [An apparatus and method for scheduling data distributions to or results information from, or collectively, "jobs" to a plurality of data processing systems via a network is implemented. A connection to a target system is created. (If a nonexclusive connection already exists, it may be used.) For each distribution, a session, which is an independent thread, is allocated from one of a plurality of pool of sessions and launched to effect execution of the job. Each pool corresponds to a predetermined priority level, and the session is allocated from the pool having the same priority level as the priority level of the job being scheduled. A connection supports a multiplicity of independent threads. In the event of an error, for example a network failure, the session is released, and the scheduling of the aborted job is retried after a predetermined connect retry interval expires. After expiry of the retry interval, a callback method is registered and invoked when the target system on which the scheduled job is executed becomes accessible. In response, the scheduling procedure is repeated for that job.]

**In the Specification:**

The Cross-Reference to Related Applications paragraph beginning at line 6 of page 1 has been amended as follows:

Related subject matter may be found in the following commonly assigned, co-pending U.S. Patent Applications, both of which are hereby incorporated by reference herein:

Serial No. 09/460,855 [(AT9-99-275)], entitled "APPARATUS FOR DATA DEPOTING AND METHOD THEREFOR"

Serial No. 09/460,853 [(AT9-99-276)], entitled "APPARATUS FOR RELIABLY RESTARTING INTERRUPTED DATA TRANSFER AT LAST SUCCESSFUL TRANSFER POINT AND METHOD THEREFOR"

Serial No. 09/438,437 [(AT9-99-274)]; entitled "AN APPARATUS AND METHOD FOR DISTRIBUTING AND COLLECTING BULK DATA BETWEEN A LARGE NUMBER OF MACHINES" and filed concurrently herewith;

Serial No. 09/458,268 [(AT9-99-324)], entitled "COMPUTER NETWORK CONTROL SYSTEMS AND METHODS" and filed concurrently herewith;

Serial No. 09/460,852 [(AT9-99-325)]; entitled "METHODS OF DISTRIBUTING DATA IN A COMPUTER NETWORK AND SYSTEMS USING THE SAME"

Serial No. 09/458,269 [(AT9-99-315)], entitled "SYSTEMS AND METHODS FOR REAL TIME PROGRESS MONITORING IN A COMPUTER NETWORK";

Serial No. 09/460,851 [(AT9-99-316)], entitled "APPARATUS FOR AUTOMATICALLY GENERATING RESTORE PROCESS DURING SOFTWARE DEPLOYMENT AND METHOD THEREFOR"; and

Serial No. 09/460,854 [(AT9-99-323)], entitled "AN APPARATUS FOR JOURNALING DURING SOFTWARE DEPLOYMENT AND METHOD THEREFOR".

The paragraph beginning at line 19 of page 17 has been amended as follows:

Returning to FIGURE 3A, if, in step 312, it is determined a session is available to the job as reported in step 450, FIGURE 4, then the session is reserved in step 314. Otherwise, if it is reported not available, step 440, FIGURE 4, step 312 proceeds by the "No" branch to step 306. Because, as previously described, jobs are enqueued in priority order, the unavailability of a session for the current job also means that the succeeding jobs cannot also be scheduled because they have a priority that is the same or lower than the current job. Thread 300 then loops in step 301 [308] for an event indicating that a session has become available, which then triggers thread 300 via the "yes" branch in step 301 [308]. Similarly as discussed below, an "UNREACHABLE" state job may become available, whereby the state goes to "WAITING", which will also trigger scheduling.

**In the Claims:**

(1) Claim 2 has been amended as follows:

1           2. (Amended) The method of claim 1 wherein said session comprises [an] a  
2           thread.

(2) Claim 13 has been amended as follows:

1           13. (Amended) The system of claim 12 wherein said session comprises [an]  
2           a thread.

(3) Claim 23 has been amended as follows:

1           23. (Amended) A computer program product embodied in a machine  
2           readable storage medium, the program product for job scheduling comprising  
3           instructions for:

4           determining if a job is available for scheduling;  
5           determining, in response to [said] instructions for determining if said job is  
6           available, if a session is available, wherein said session is included in a pool of  
7           sessions, said pool of-sessions having a preselected one of a set of priority levels

8 corresponding to a priority level of said job and wherein said session effects an  
9 execution of said job; and  
10 launching said session to effect said execution of said job, if said session is  
11 available.

(4) Claim 24 has been amended as follows:

1 24. (Amended) The program product of claim 23 wherein said session  
2 comprises [an] a thread.

(5) Claim 30 has been amended as follows:

1 30. (Amended) The program product of claim [29] 23 further comprising  
2 programming for retrying said steps of determining if a job is available for  
3 scheduling, determining if a session is available, and launching said session in  
4 response to an error condition.

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